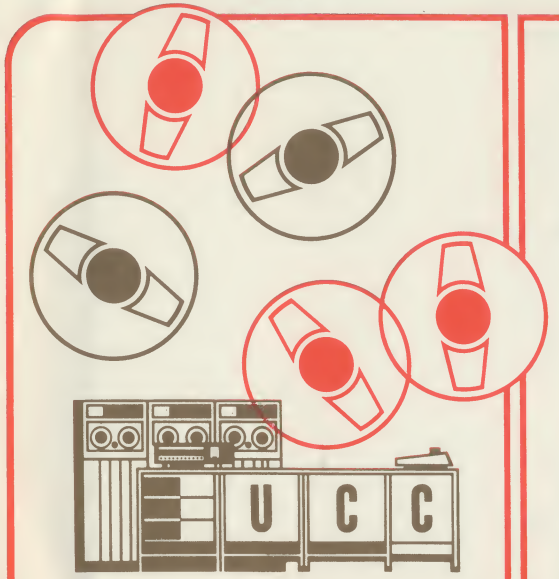

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BASICS OF LINEAR PROGRAMMING:
THE COMPUTER AND THE CALCULUS.

Dear Sir:

Had Newton been equipped with this year's generation of computers, he most probably would still have invented the calculus, for even the most sophisticated computers have trouble with the complex problems posed by explorations into this mathematical discipline.

It is with this thought in mind that we extend an invitation to attend a scheduled seminar in Basics of Linear Programming, in New York City, on October 21. At this five-day seminar, conducted by Dr. R.L. Gue and Dr. Michael O'Hagan, of the SMU Computer Sciences Center, you will be exposed to software disciplines and practices that will thoroughly acquaint you with the fundamentals of linear programming.

A syllabus and a textbook on the subject will be provided as a part of the course and will become a part of your own library upon completion of the seminar on October 25. These texts, plus the precise approach used by Dr's. Gue and O'Hagan, will give you a thorough exposure to linear programming (which has basically to do with batch processing of simultaneous equations and other mathematical drudgery that is necessary for analysis of complex derivations). Additionally, the panel members will remain available on a consultant basis to you for a three month interval after the semiar at no further charge.

So, <u>if</u> you are not already familiar with this aspect of computer technology; and <u>if</u> you are deeply involved in systems, operations, and management analysis; your education <u>may</u> not be complete.

Please use the enclosed materials today to make your enrollment a matter of record. We will be looking forward to seeing you in New York.

Sincerely,

James Wildman
Director of Seminar Development
University Computing Company

BASICS OF LINEAR PROGRAMMING

October 21-22-23-24-25, 1968
Sheraton Motor Inn
New York, N.Y.

This seminar is designed to introduce the broad applications of linear programming models and to discuss fundamental concepts used in solving linear programming problems.

ADVISORY PANEL

Panel members, who have cooperated in the development of this seminar, are also available for reply to your written questions on subjects covered during the seminar for three months after you attend. Panel members are:

Dr. Ronald L. Gue
Professor and Director
Computer Sciences Center
Southern Methodist University
Dallas, Texas

Dr. Michael O'Hagan
Associate Professor
Computer Sciences Center
Southern Methodist University
Dallas, Texas

Mr. James Wildman
Director of Curriculum
Development
University Computing Company

INSTRUCTORS

Dr. Ronald L. Gue: Professor and Director, Computer Sciences Center, Southern Methodist University, Dallas, Texas. Dr. Gue has several years background in linear and integer programming. His current research efforts are directed toward combinatorial optimization and the construction of algorithms for solution of integer programming problems. This work is sponsored by a grant from the U. S. Public Health Service to study linear programming

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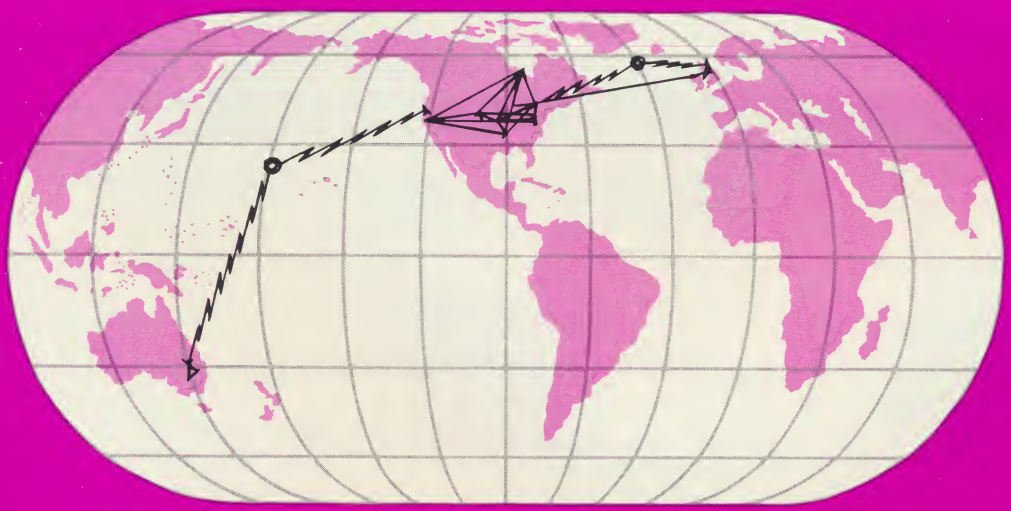


applications in dietetics. Dr. Gue has been a consultant to several large corporations, as well as the Veteran's Administration and U. S. Public Health Service.

Before joining S.M.U., Dr. Gue was Associate Professor in the Industrial and Systems Engineering Department, University of Florida. He received his Ph.D. in operations research from The Johns Hopkins University. He is the author of several papers in the operations research literature and co-author of the text, *Mathematical Methods in Operations Research.*

Dr. Michael O'Hagan: Associate Professor, Computer Sciences Center, Southern Methodist University, Dallas, Texas. Dr. O'Hagan's ten years of industrial experience includes work in design of experiments, linear programming, real time production planning, inventory theory and design automation. His current research efforts are directed toward the use of nonlinear programming in high frequency circuit optimization, and he is currently a consultant to several large corporations.

Before joining S.M.U., Dr. O'Hagan was manager of the Design Automation Branch of the Semiconductor Components Group, Texas Instruments, Inc. He received his Ph.D. in operations research from Stanford University and has published papers in electronics and operations research literature.

BASICS OF LINEAI

WHO SHOULD ATTEND

The content is oriented toward systems and operations analysts, engineers, and management analysts, as well as programming analysts from a wide variety of disciplines.

COURSE OUTLINE

I. Linear Programming Models

- A linear programming problem will be motivated through modeling and problem formulation.
  - Model Derivation
  - Alternative geometric problem formulations
  - Graphical solution of simple linear programming problems

II. Matrices and Simultaneous Equations

- A discussion of the fundamentals of matrices and vectors.
  - Matrix Operations
  - Solution of simultaneous linear equations
  - Generating basic solutions
  - Changing a basis
  - Basic feasible solutions

III. Simplex Method

- A discussion of the simplex equations technique as a tool to solve linear programming problems
  - Computational formulas
  - Construction of a simplex algorithm
  - Redundant and inconsistent constraints
  - Artificial variables and starting solutions
  - Hand calculation compared to computer solutions
  - Computer codes of the simplex algorithm and its variations

REGISTRATION

The $310 registration fee includes luncheons and the course library. To register, write or call:

The Registrar
University Computing Company
1930 Hi-Line Drive
Dallas, Texas 75207
(214) 741-4051

PARKING

Classes begin at 9:30 a.m. and end at 5:30 p.m.

HOURS

Parking will be available in the hotel garage.

R PROGRAMMING

COURSE OBJECTIVE The course is designed to introduce the student to the broad applications of linear programming models and to discuss fundamental concepts used in solving linear programming problems. Applications will be used from a wide variety of areas including the transportation, production and health fields.

IV. Duality and Sensitivity Analysis

- Definition of the dual linear programming problem.
  - Properties of the dual problem
  - Primal dual relationships
  - Economic interpretation of dual problems
  - Shadow prices

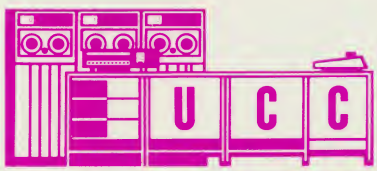
V. Case Studies

- Discussion of actual case study applications of linear programming.
  - Problems formulated and solved
  - Use of an existing computer code to solve case studies

COURSE LIBRARY

Basics of Linear Programming syllabus, a narrative outline of course content, including exhibits referred to in lectures. By R. W. Llewellyn.

Linear Programming, published by Holt, Rinehart & Winston; New York, 1964.



LOCATION

This seminar will be conducted at the Sheraton Motor Inn located in lower Manhattan. Limousine service is available from either LaGuardia or JFK Airports.

HOTEL ACCOMMODATIONS

Hotel accommodations are not made by University Computing, however room reservation cards will be sent to you with confirmation of your enrollment. The Sheraton Motor Inn (12th Avenue at 42nd Street, New York, N.Y. 10036, (212) OX 5-6500) is holding a block of rooms at $16-$19 single and $21-$24 double. These rooms will be held until two weeks before the seminar, therefore early registration is suggested.

REGISTER ME FOR: **BASICS OF LINEAR PROGRAMMING**

163

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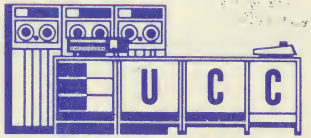

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